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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

GUARRIELLO, JOHN J

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 12/03/2002

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/506318

Applicant(s)

Echigo et al.

Examiner

John Guarriello

Group Art Unit

1771

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 9/10/2003, 11/22/2003, 11/26/2002
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 13-36 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 13-36 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. _____
- ☐ Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

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DETAILED ACTION

15. The Examiner acknowledges papers # 9-11, the response of 9/10/2002 regarding the election of claims 13-36, the CPA papers faxed 11/22/2002 since they were missing from the amendment of 6/12/2002, and the correction of the filing receipt of 11/26/2002. With the entry of the CPA papers, the Examiner affirms applicant's election of Group II, claims 13-36.

16. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

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17. Claims 13-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 13, line 1, it is not clear what is encompassed by the phrase of the preamble “of a short fiber nonwoven fabric” since this appears to be intended use. The Examiner will interpret the preamble as directed to a prepreg comprising thermally resistant fibers bonded by an inorganic binder and further impregnated with a resin varnish and dried. The reference to “short fibers” and “nonwoven fabric” is a lack of clear antecedent basis since these terms are not directly following the open language of “comprising” but appear to be intended use.

In claim 15, it is not clear what is encompassed by the short fibers, since this appears to be a lack of antecedent basis to claim 13. Further, it is not clear what the phrase “at the intersections” refers since this does not appear in claim 13, again lack of clear antecedent basis to claim 13.

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In claim 22, it is not clear what the nonwoven fabric refers in claim 13 since this appears to be a lack of clear antecedent basis.

Claim Rejections - 35 USC § 102

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 13-16, 20-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Ashida et al. 6,200,706.

Ashida describes a nonwoven fabric (which is impregnated corresponding to a prepreg) which is produced by a wet paper making process, (see abstract; column 11, lines 15-17). Ashida describes heat resistant aramid fibers, (column 3, lines 9-35; column 7, lines 60-66). Ashida

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describes inorganic binders such as colloidal silica and colloidal alumina, (column 9, lines 23-26). Ashida describes fibers are 5 mm or less, (column 7, lines 44-45). Ashida describes the diameter of the fiber is 0.1-3.00 deniers, (column 9, lines 13-15). Ashida describes weight of non-woven fabric as 10-50 g/sq.m., (column 9, lines 32-34), encompassing claim 23. Ashida describes the thickness of the non-woven fabric about 10-100 microns, (column 9, lines 35-45), encompassing claim 24. It is the Examiner's position that the claimed invention is directed to a prepreg comprising a nonwoven fabric of fibers with fibers bonded with an inorganic binder holding the fibers and the resulting material impregnated with a resin varnish and dried. Ashida describes the essential limitations of the claimed invention. Claims lack novelty.

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 13, 15, 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Kappeler et al. 6,214,072.

Kappeler describes a filter bag (which can correspond to a prepreg since it is impregnated with a resin) made of a filter medium with non-woven glass fibers which are fixed at crossover points (corresponding to the claimed invention of “intersections”) with organic-inorganic or inorganic binders, (see abstract; column 1, lines 66-68; column 2, lines 1-5). Kappeler describes coating the glass fibers with an organic-inorganic or inorganic binder to effect fixation of the fibers at crossover points, (corresponding to the claimed invention of “intersections”), (column 2, lines 14-18). Kappeler describes the essential limitations of the claimed invention. Claims lack novelty.

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Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 13, 18, 19, 25-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashida et al. 6,200,706 in view of EP 807 703 and JP-11-128667.

Ashida as in paragraph # 23 above with the exception that Ashida is silent about glass fibers, prepreg, and circuit board.

EP703 describes a nonwoven fabric cloth and a prepreg and a printed wiring board using the nonwoven fabric cloth substrate, (see abstract; page 2, lines 3-6; lines 33-53; page 3, lines 1-27).

JP'667 teaches the equivalence of colloidal silica and water glass as inorganic binders, (see abstract).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the nonwoven substrate fabric as a prepreg or circuit board of EP'703 and to modify the colloidal silica inorganic binder of Ashida with the waterglass fibers of JP'667 since they are art recognized equivalents, motivated with the expectation that there would be an improvement in the properties of the nonwoven material for the dielectric properties for a more reliable circuit board as noted in EP'703. Moreover, although siloxane bonding coating is not stated it would be obvious to one of ordinary skill in the art to use siloxane bonding for its ability for moisture reduction for the fibers in the circuit board utility.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Guarriello whose telephone number is (703) 308-3209. The examiner can normally be reached on Monday to Friday from 8 am to 4 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris, can be reached on (703) 308-2414. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5408.

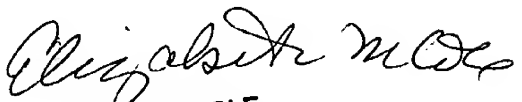
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



John J. Guarriello:gj

Patent Examiner

November 20, 2002



ELIZABETH M. COLE
PRIMARY EXAMINER